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| APPLICATION NO.   | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 09/484,549  | 01/18/2000  | Korbin Van Dyke      | 01000.9901080       | 9816             |
| 24228   | 7590        | 05/03/2005           | EXAMINER            |                  |
| MARKISON & RECKAMP, PC<br>PO BOX 06229<br>WACKER DR<br>CHICAGO, IL 60606-0229 |             |                      | ALI, SYED J         |                  |
|   |             |                      | ART UNIT            | PAPER NUMBER     |
|   |             |                      | 2195                |                  |

DATE MAILED: 05/03/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/484,549

Applicant(s)

DYKE ET AL.

Examiner

Syed J. Ali

Art Unit

2195

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 01 November 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 2-12 and 14-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 2-12 and 14-17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

1. This office action is in response to the amendment filed November 1, 2004. Claims 2-12 and 14-17 are presented for examination.

2. The text of those sections of Title 35, U.S. code not included in this office action can be found in a prior office action.

### ***Claim Objections***

3. **Claim 17 is objected to because of the following informalities:**

a. In lines 13 and 16 of claim 17, "provide" should read "provides".

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

4. **Claims 2-14 and 15-17 are rejected under 35 U.S.C. 102(b) as being anticipated by Bonola (USPN 5,706,514).**

5. As per claim 15, Bonola teaches the invention as claimed, including a method for providing multimedia functionality in a homogeneous multiprocessor environment comprising the steps of:

    queuing tasks (col. 3 lines 61-65);

    identifying available processing resources in the homogeneous multiprocessor environment (col. 7 lines 36-38);

allocating the available processing resources among the tasks based on the capabilities of each of the available processing resources and the processing requirements of each of the tasks (col. 7 lines 42-52; col. 8 lines 11-13);

providing to the available processing resources functional programs and initial data corresponding to the tasks (col. 8 lines 13-18); and

performing the tasks using the available processing resources to produce resulting data (col. 9 lines 13-23).

6. As per claim 2, Bonola teaches the invention as claimed, including the method of claim 15 wherein a plurality of processors of the homogeneous multiprocessor environment are capable of executing a first instruction of a first instruction set and a second instruction of a second instruction set (col. 2 lines 6-10; col. 3 lines 37-44).

7. As per claim 3, Bonola teaches the invention as claimed, including the method of claim 2 wherein the first instruction and the second instruction share an identical bit pattern but perform different operations (col. 1 lines 15-26).

8. As per claim 4, Bonola teaches the invention as claimed, including the method of claim 3 wherein a first processor of the plurality of processors executes an input/output kernel program, the input/output kernel program including a first portion expressed using the first instruction set and a second portion expressed using the second instruction set (col. 3 lines 26-35; col. 7 lines 22-33).

9. As per claim 5, Bonola teaches the invention as claimed, including the method of claim 3 further comprising the step of:

converting a functional program of the functional programs expressed using the first instruction set to an equivalent functional program expressed using the second instruction set (col. 8 lines 31-45).

10. As per claim 6, Bonola teaches the invention as claimed, including the method of claim 3 wherein the tasks comprise x86 processing (col. 1 lines 15-26), wherein graphic image processing, video processing, audio processing, and communication processing are just some of the types of tasks that can be performed on an x86 system.

11. As per claim 7, Bonola teaches the invention as claimed, including the method of claim 3 further comprising the step of:

receiving the initial data from a first input/output device (col. 8 lines 11-15).

12. As per claim 8, Bonola teaches the invention as claimed, including the method of claim 3 further comprising the step of:

passing the resulting data to a first input/output device (col. 9 lines 13-23).

Art Unit: 2195

13. As per claim 9, Bonola teaches the invention as claimed, including the method of claim 8 wherein the step of passing the resulting data to the first input/output device further comprises the step of:

passing the resulting data through an intermediary device, wherein the intermediary device is coupled to the first input/output device and to a second input/output device (col. 9 lines 13-23).

14. As per claim 10, Bonola teaches the invention as claimed, including the method of claim 9 wherein the step of passing the resulting data through an intermediary device, wherein the intermediary device is coupled to the first input/output device and to a second input/output device further comprises the step of:

automatically adapting to a reallocation of the available processing resources among the tasks (col. 8 lines 46-65).

15. As per claim 11, Bonola teaches the invention as claimed, including the method of claim 8 wherein the step of passing the resulting data to a first input/output device further comprises the step of:

passing the resulting data to a mixed-signal device (col. 9 13-15, 19-23).

16. As per claim 12, Bonola teaches the invention as claimed, including the method of claim 3 wherein the step of allocating the available processing resources among the tasks is dynamically adjusted (col. 8 lines 46-65).

17. As per claim 16, Bonola teaches the invention as claimed, including the method of claim 15, further comprising:

keeping track, remotely from the resources, of the capabilities of all available processing resources (col. 7 lines 42-52); and

identifying available processing resources in the homogeneous multiprocessor environment based solely on the capabilities kept track of remotely (col. 7 lines 36-38, 42-52).

18. As per claim 17, Bonola teaches the invention as claimed, including an apparatus comprising:

a plurality of processors coupled to a bus (col. 4 lines 29-33);

an input/output interface coupled to the bus (col. 4 lines 52-54);

a plurality of input/output devices coupled to the input/output interface (col. 4 lines 52-57), the plurality of processors processing program code configured to perform a plurality of tasks (col. 9 lines 24-27), the program code comprising:

program code configured to cause a first portion of the plurality of processors to interact with a first input/output device of the plurality of input/output devices (col. 7 lines 22-25);

program code configured to cause a second portion of the plurality of processors to interact with a second input/output device of the plurality of input/output devices (col. 7 lines 42-52);

program code configured to cause a second portion of the plurality of processors to emulate a specific microprocessor instruction set (col. 8 lines 11-18);

wherein the first portion of the plurality of processors provides functionality as found in a first application-specific subsystem and wherein the first input/output device is the first application-specific subsystem (col. 3 lines 23-30); and

wherein the second portion of the plurality of processors provides functionality as found in a second application-specific subsystem and wherein the second input/output device is the second application-specific subsystem (col. 7 lines 42-52; col. 8 lines 11-18).

19. As per claim 14, Bonola teaches the invention as claimed, including the apparatus of claim 17 further comprising:

kernel program code configured to dynamically allocate the processing of the program code among the plurality of processors (col. 3 lines 26-35; col. 7 lines 22-33; col. 8 lines 11-18).

### ***Response to Arguments***

20. **Applicant's arguments with respect to claims 2-12 and 14-17 have been considered but are moot in view of the new grounds of rejection.**

### ***Conclusion***

21. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Syed J. Ali whose telephone number is (571) 272-3769. The examiner can normally be reached on Mon-Fri 8-5:30, 2nd Friday off.



Art Unit: 2195

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai T. An can be reached on (571) 272-3756. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Syed Ali  
April 27, 2005



MAJID BANANKHAH  
PRIMARY EXAMINER